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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 6893-3 (1988): Proforma for purchase specification for machine tools, Part 3: Radial drilling machines [PGD 3: Machine Tools]

“ज्ञान से एक नये भारत का निर्माण”

Satyanaaranay Gangaram Pitroda

Invent a New India Using Knowledge



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartṛhari—Nītiśatakam

“Knowledge is such a treasure which cannot be stolen”



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*Indian Standard**"ભારત સ્ટાન્ડર્ડ"*
"RE-AFFIRMED 1996"

PROFORMA FOR PURCHASE SPECIFICATION FOR MACHINE TOOLS

PART 3 RADIAL DRILLING MACHINES

(First Revision)

1. Scope — Recommends the proforma for preparation of purchase specifications for radial drilling machines. It also gives essential information about the radial drilling machines and their accessories which will enable the user to assess the usefulness and suitability for requirements.

2. Proforma

<i>Specifications</i>	<i>Reference to Indian Standard</i>	<i>Unit</i>	<i>Actual Value</i>
1	2	3	4
2.1 Capacity			
2.1.1 Drilling capacity (in solid):		mm	
a) In steel having 600 MPa tensile strength			
b) Cutting speed		m/min	
c) Feed		mm/rev	
2.1.2 Tapping capacity:			
a) Metric threads up to size			
b) Any other threads (on request)			
2.1.3 Distances:			
a) Maximum drilling radius		mm	
b) Maximum distance between base plate and spindle (spindle retracted)		mm	
c) Minimum distance between base plate and spindle (spindle retracted)		mm	
d) Maximum drilling head traverse		mm	
2.1.4 Base plate:			
a) Length × width (working surface)		mm × mm	
b) T-slots:			
i) Nominal size	IS : 2013-1985	mm	
ii) Number/spacing	IS : 2642-1985	No./mm	
2.2 Drill Spindle			
2.2.1 Taper in spindle	IS : 1715-1986		
2.2.2 Spindle travel auto/manual		mm	
2.3 Spindle Speeds			
2.3.1 No. of speeds/range		rev/min	

IS : 6893 (Part 3) - 1988

<i>Specifications</i>	<i>Reference to Indian Standard</i>	<i>Unit</i>	<i>Actual Value</i>
1	2	3	4
2.4 Feeds			
2.4.1 No. of feeds/range		mm/min	
2.4.2 Rapid feeds:		mm/min	
a) Travel of rail (vertical)		mm/min	
b) Travel of drilling head (horizontal)		mm/min	
2.5 Lubrication			
2.5.1 Type of lubrication (Details to be specified)			
2.6 Electricals			
2.6.1 Total power		kW	
2.6.2 Power supply		V, ph, Hz	
2.6.3 Motor(s):			
2.6.3.1 Main:			
a) Type			
b) Frame size and mounting	IS : 1231-1974	kW	
c) Output(s)		rev/min	
d) Speed(s)			
e) No. of phases		%	
f) Power factor		V	
g) Efficiency		Hz	
h) Rated voltage			
j) Frequency		°C	
k) Type of duty			
m) Class of insulation			
n) Ambient temperature			
p) Type of protection	IS : 4691-1985		
q) Type of cooling	IS : 6362-1971		
r) Vibration limit	IS : 4729-1968		
s) Any other feature			
2.6.3.2 Other motor(s):			
a) Type			
b) Frame size and mountings	IS : 1231-1974	kW	
c) Output(s)		rev/min	
d) Speed(s)			
e) No. of phases		%	
f) Power factor		V	
g) Efficiency		Hz	
h) Rated voltage			
j) Frequency		°C	
k) Type of duty			
m) Class of insulation			
n) Ambient temperature			

<i>Specifications</i>	<i>Reference to Indian Standard</i>	<i>Unit</i>	<i>Actual Value</i>
1	2	3	4
p) Type of protection q) Type of cooling r) Vibration limit s) Any other features	IS : 4691-1985 IS : 6362-1971 IS : 4729-1968		
2.7 Coolant Pump 2.7.1 Output(s) of motor 2.7.2 Speed of motor 2.7.3 Discharge of pump at maximum working height (see dimension H_1 in Fig. in Appendix A)	IS : 2161-1962	kW rev/min l/min	
2.8 Geometrical and Practical Test	IS : 2199-1962		
2.9 Noise Emitted by Machines	IS : 10988-1984	dB(A)	
2.10 Mechanical Guarding	IS : 9474-1980		
2.11 Colour(s)	IS : 5-1978		
2.12 Weight of Machine with Electricals and Standard Accessories		kg	
2.13 Floor Space Required: (Length × Width)		mm × mm	
2.14 Standard Accessories: (Details of accessories — IS No. to be specified wherever applicable like, drill drift, spanners, etc)			
2.15 Special Accessories: (Details of accessories — IS No. to be specified wherever applicable like, reduction sleeves, extension sockets, etc)			

Note — While submitting quotations, the following information shall be furnished by manufacturers/suppliers together with technical literatures and capacity chart of the machine (*see Appendix A for a representative capacity chart for radial drilling machine*);

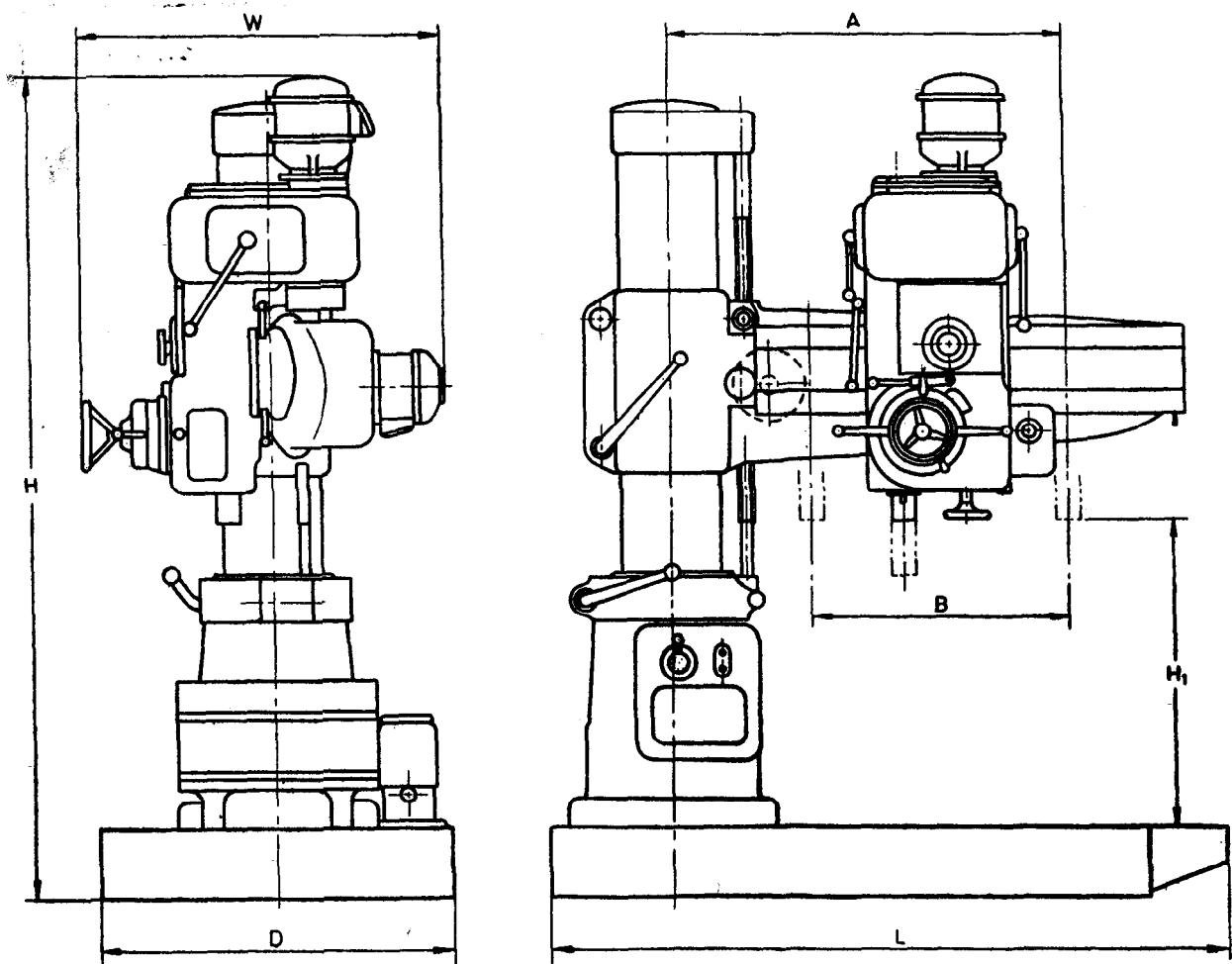
- a) Hardness of guideways of drill head, and
- b) Any other special features.

APPENDIX A

REPRESENTATIVE CAPACITY CHART FOR RADIAL DRILLING MACHINES

Note — Manufacturers/suppliers shall specify the basic information called for in the figure below:

Maximum drilling radius, A	=
Maximum drill head traverse, B	=
Maximum working height, H_1	=
Width of base plate, D	=
Overall length, L	=
Overall Width, W	=
Overall height, H	=



EXPLANATORY NOTE

The proforma for preparation of purchase specification for machine tools has been prepared to enable a prospective buyer to collect data from various manufacturers/suppliers for the purposes of comparison. This proforma is meant to be sent out with an enquiry by the purchaser so that the manufacturers/suppliers can fill in the data and send it back to the purchaser to make the comparison easier for the purchaser.

Reference is made to the following Indian Standards in this proforma:

- IS : 5-1978 Colours for ready mixed paints (*third revision*)
- IS : 1715-1986 Dimensions for self holding tapers (*second revision*)
- IS : 2013-1985 Dimensions for T-slots (*second revision*)
- IS : 2161-1962 Specifications for coolant pumps for machine tools
- IS : 2199-1962 Test chart for radial drilling machines
- IS : 2642-1985 Spacing for T-slots (*second revision*)
- IS : 4691-1985 Degrees of protection provided by enclosures for rotating machinery
- IS : 4729-1968 Measurement and evaluation of vibration of rotating electric machines
- IS : 9474-1980 Principles of mechanical guarding of machinery
- IS : 10988-1984 Method of measurement of noise from machine tools

This standard was first published in 1973. The committee responsible for the formulation of this standard decided to revise the same based upon the experience gained. In the present revision, detailed requirements of motors and coolant pumps requirements for environmental and safety aspects have also been included in the proforma.